

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 2000173630
PUBLICATION DATE : 23-06-00

APPLICATION DATE : 02-12-98
APPLICATION NUMBER : 10342688

APPLICANT : TOKAI CARBON CO LTD;

INVENTOR : TAKIZAWA YASUHIRO;

INT.CL. : H01M 8/02 B29C 43/10 C01B 31/04 C08K 3/04 C08L101/00 H01M 8/10 //
B29K103:04

TITLE : MANUFACTURE OF SEPARATOR MEMBER FOR SOLID POLYMER FUEL CELL

ABSTRACT : PROBLEM TO BE SOLVED: To realize a manufacturing method for a member which is suitable for the separator of a solid polymer fuel cell high in material isotropy, is small especially in electrical resistivity and anisotropy, and is superior in gas impermeability.

SOLUTION: This separator member is manufactured which includes the steps of a kneaded mixture being prepared by mixing 80-95 wt.% flake such as natural graphite powders or expanded graphite powders with 20-5 wt.% thermosetting resin containing not less than 65% nonvolatile matter, the kneaded mixture is granulated, the granulated pellets of 10-1,000 µm diameters are filled in a forming container, the container is decompressed and deaerated, the granulated pellets in the container are isotropically pressure-molded, the molded body is machined to have a prescribed shape and then is thermally cured at a temperature of 150-280°C. Alternatively, the molded body is thermally curbed at a temperature of 150-280°C and then is machined to have the prescribed shape. Preferably, surface-treated flake-like natural graphite powders or expanded graphite powders are used, and the porosity of the granulated pellet is regulated to be not less than 5%.

COPYRIGHT: (C)2000,JPO